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was as favorable for the investigation of this phenomenon by students as any of the standard subjects.

For the lack of a better name, that of " trigger-hairs " is given to these outgrowths. This seems to be descriptive of their use, for when they are touched by the slender legs of insects the impulse is communicated to other parts, and a downward motion of the anther-ring results. This liberates a quantity of pollen at a time and place when it will be most likely to get upon the insect's body and be thereby transferred to some other flower. The structure and the movement are undoubtedly provisions for wide fertilization, and the trigger-hairs are the means by which the visiting insect springs the trap and catches the pollen.

BYRON D. HALSTED.

Bibliographical Notes on well-known Plants.—VII.

By EDWARD L. GREENE.

CASTALIA and NYMPHÆA.

The learned editor of the Journal of Botany has already* well taken the initiative in that work of readjusting the names of the water-lilies, which the priority of Salisbury's monograph, lately shown in this Journal† has rendered necessary.

Several North American species, not known to Salisbury, and therefore not taken up by Mr. Britten, remain to be named.

NYMPHÆA POLYSEPALA.—*Nuphar polysepalum*, Engelm. Trans. St. Louis. Acad., ii, p. 282 (1865).

NYMPHÆA RUBRODISCA.—*Nuphar rubrodiscum*, Morong. Bot. Gaz., xi, p. 167 (1886).

CASTALIA TUBEROSA.—*Nymphæa tuberosa*, Paine Catal. Pl. Oneida, p. 184 (1865). It can scarcely be doubted that certain specific names, far older than *tuberosa*, were meant for this commonest and most widely dispersed North American water-lily; some published in the latter part of the last century, by Walter and by Willdenow, and others early in the present century, by Rafinesque; but, owing to the meagre descriptions and the lack of authentic specimens, nothing can be done in the way of restoration, and I adopt here the earliest name which, as it appears to me, can with certainty be applied to this species.

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*James Britten, Journ. Bot., Jan., 1888, p. 6.

† E. L. Greene, BULL. TORR. BOT. CLUB, xiv, pp. 177 and 257.

CASTALIA FLAVA.—*Nymphæa flava*, Leitner in Audub. Birds, p. 411 (1838): *N. lutea*, Treat in Harp. Mag., lv, p. 365, (1877), not of Linn.

CASTALIA ELEGANS.—*Nymphæa elegans*, Hook. Bot. Mag. t., 4604 (1851); E. E. Sterns, BULL. TORR. BOT. CLUB, xv, p. 13 (1888).

While it was confessedly Salisbury's privilege, as a post-Linnæan author, to name the two genera of northern water-lilies whose respective characters it may either be that he discovered independently or that he learned them from the pre-Linnæan, Boerhaave, it is not shown, and I think no one will contend that he had a right to coin new specific names for plants which were neither new nor in want of names as species. Yet, without the least excuse he set aside several which had been in constant use by all Linnæan botanists, and one which had been familiar to, and almost universally employed by, all authors for some centuries before Linnæus. This was Salisbury's offense against one great rational principle of nomenclature; this *his* unfaithfulness to his predecessors and contemporaries. Why need we, in our attempts to restore to him his rights, stand by him in his own wrong-doing? The following names and synonyms will illustrate my meaning:

CASTALIA ALBA.—*Nymphæa alba*, Mathiolus, Comm. Diosc. (1558); Valerius Cordus, Hist. (1561); Pena & Lobel, Adv. (1570); Dodoens, Pempt. (1585); Camerarius, Epit. (1586); Tabernæmontanus, Icones, (1590); Gerarde, Herbal, (1633); J. Bauhin, Hist. (1651); Plukenet, Alm. (1691); Ray, Syn. (1696 and 1724); Blackwell, Herbal, (1737); Linnæus, Sp. Pl. (1753); thence all authors, almost to *Castalia speciosa*, Salisb. (1805); Britten (1888).

CASTALIA ODORATA.—*Nymphæa odorata*, Dryander, in Hort. Kew., ii, p. 237 (1803): *Castalia pudica*, Salisb. (1805); Britten (1888).

Proposed Revision of North American Smilaces.

A careful examination of the authorities on *Smilax*, Tourn., and of the Columbia College specimens of this genus, convinces me that no sound and satisfactory revision of the North American species, subspecies and varieties, some thirty in number, can be made without new and complete specimens of most of the forms, and accurate field notes concerning many of them. A complete specimen of *Smilax* includes the base of the stem (at least a foot of it) with enough of the rhizome and root attached to show clearly whether there is any tuberous development; two flowering branches not less than two feet long—one staminate and one pistillate—and a fully matured fruiting branch of equal length. The field notes should state distinctly the habitat, degree of abundance, size, duration of leaf, time of flowering and fruiting, exact color and odor of flowers, and color of fruit while ripening and also when mature; in the case of all anomalous (perhaps hybrid) forms the names of other species growing near should be noted. Anything, however meagre, relating to the genus will be welcome, and I venture to hope that botanists and amateurs throughout the country will aid me in obtaining from their respective sections the necessary material for an adequate (and much needed) revision of our *Smilaces.* Fresh specimens, snugly rolled in newspapers, will be even preferable to exsiccatæ, and will be much less trouble to the sender.

It is believed that *Smilax* is always entomophilous, and accurate observations as to the insects by which fertilization is effected are especially desired.

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Reviews of Foreign Literature.

Ueber künstliche Vergrünung der Sporophylle von Onoclea Struthiopteris, Hoffm. By K. Gœbel. (From the Berichte der deutschen botanischen Gesellschaft, Dec. 16, 1887.)

This short paper contains an account of an experiment tried in the botanical garden at Marburg. It begins with a reference to some previous experiments of the author, to show that in a number of organs metamorphosis is a real transformation which may be experimentally proven, and not the ideal, indefinite con